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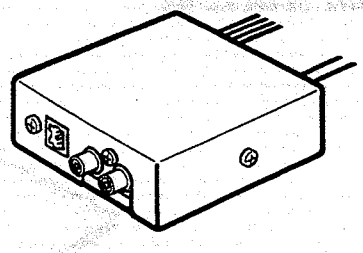
*The Art of Entertainment*

# Service Manual



ORDER NO.
**CRT1657**

RCA TO IP-BUS INTERCONNECTOR

# CD-RB20 E

● **This Service Manual has been written in English and Japanese.**

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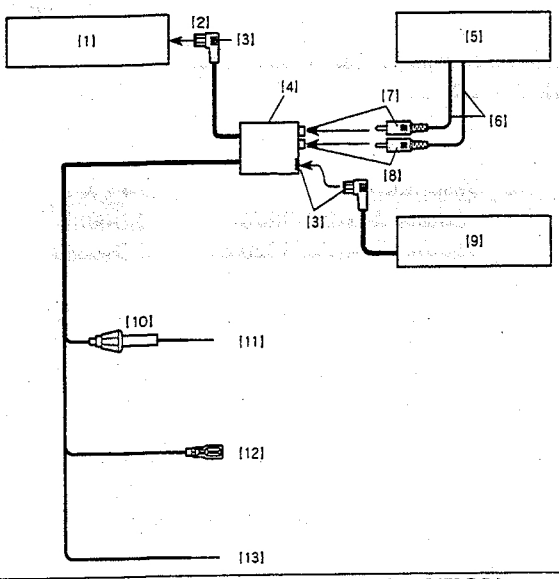
## SPECIFICATIONS

Power source
..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 50 mA
Maximum rated input level ..... 1V
Dimensions ..... 84 (W) × 30 (H) × 87 (D) mm
Weight ..... 300 g

**Note:**
Specifications and the design are subject to possible modification without prior notice due to improvements.

## CONNECTING THE UNITS




- Before mounting, connect the units temporarily. Check that the units are connected correctly by operating the multi-CD controller.
- *Be sure to connect the ground lead (black) to the vehicle body or some other metal part that is properly grounded to the chassis. If the ground lead is not properly connected, noise may occur or the player or multi-CD controller may not operate correctly.*
- *This unit is for vehicles with a 12-volt battery and negative grounding. Before installing it in a recreational vehicle, truck, or bus, check the battery voltage.*
- *To avoid shorts in the electrical system, be sure to disconnect the battery (–) cable before beginning installation.*
- *Check whether installation and wiring have been completed correctly. Replace the removed car components, then connect the end of the cable to the negative (–) terminal of the battery.*
- *Secure the wiring with cable clamps or adhesive tape. To protect the wiring, wrap adhesive tape around them where they lie against metal parts.*
- *Route and secure all wiring so it cannot touch any moving parts, such as the gear shift, handbrake, and seat rails. Do not route wiring in places that get hot, such as near the heater outlet. If the insulation of the wiring melts or gets torn, there is a danger of the wiring short-circuiting to the vehicle body.*
- *Don't pass the orange lead through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.*
- *Do not shorten any leads. If you do, the protection circuit may fail to work when it should.*
- *Never feed power to other equipment by cutting the insulation of the power supply lead of the unit and tapping into the lead. The current capacity of the lead will be exceeded, causing over heating.*
- *Replace fuses only with the types stipulated on the fuse holder.*

[1] IP-BUS main unit
[2] Connected to IP-BUS input (blue)
[3] IP-BUS (blue)
[4] This unit
[5] External device with RCA output (car navigation units, VCRs, DAT decks, etc.)
[6] RCA output
[7] Red
[8] White
[9] IP-BUS multi-CD player
[10] Fuse folder
[11] Orange
To a terminal always supplied with power regardless of ignition switch position.
[12] Orange
Connect to Multi-CD unswitched power supply.
[13] Black (ground)
To vehicle (metal) body.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# 1. PACKING METHOD/包装仕様

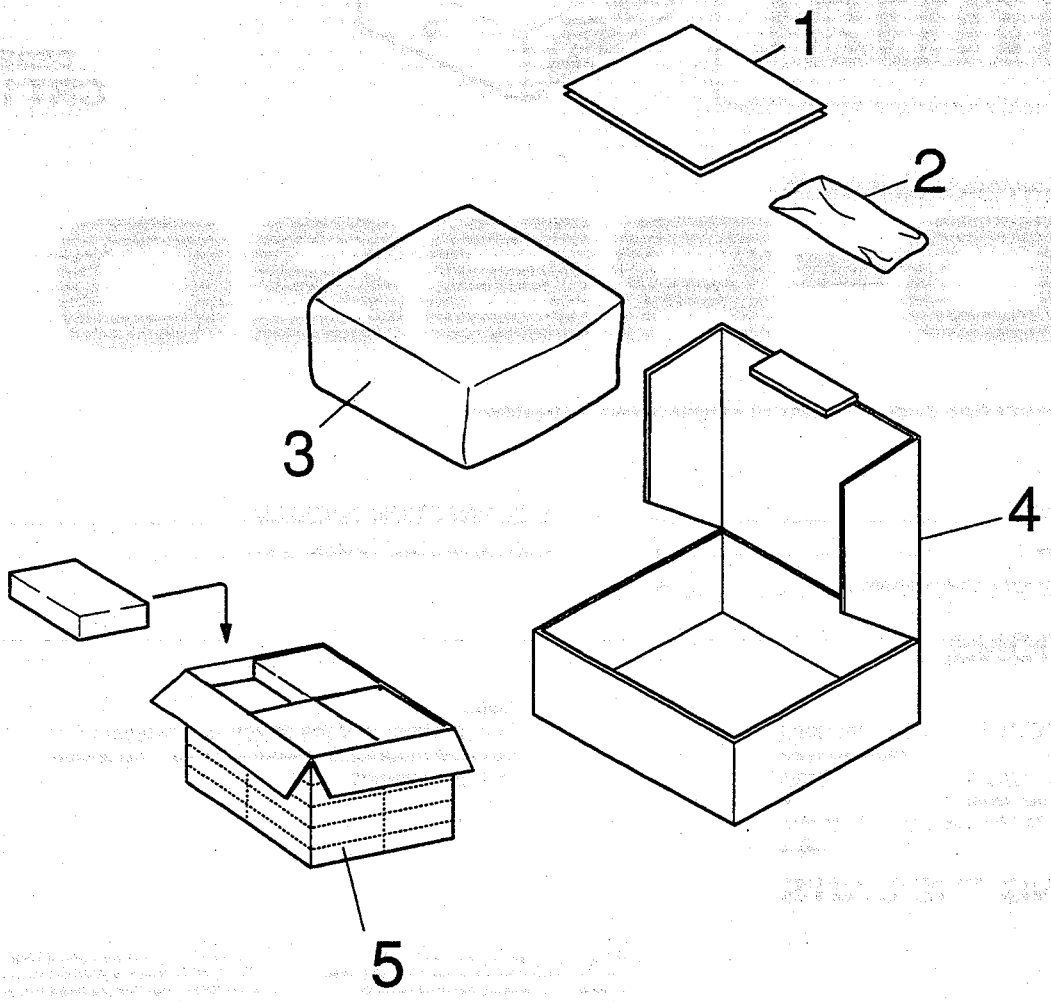



Fig.1

● Parts marked by "✱"are generally unavailable because they are not in our Master Spare Parts List.
● ✱印の部品は、サービス用部品ではありません。従って原則として供給できません。

## ● Parts List

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 1 | Owner's Manual(CD-RB20) | CZR3149 |
| | | Owner's Manual(CD-RB20/E) | CZR3153 |
| | 2 | Fastener(Rough)(×2) | CNM-667 |
| ✱ | 3 | Polyethylene Bag | E36-637 |
| | 4 | Carton(CD-RB20) | CZH6056 |
| | | Carton(CD-RB20/E) | CZH6062 |
| | 5 | Contain Box(CD-RB20) | CZH6057 |
| | | Contain Box(CD-RB20/E) | CZH6063 |

## ● Owner's Manual

| Part No. | Language |
|---|---|
| CZR3153 | English,French,German,Spanish,Italian |

# 2. EXPLODED VIEW/分解図および部品表

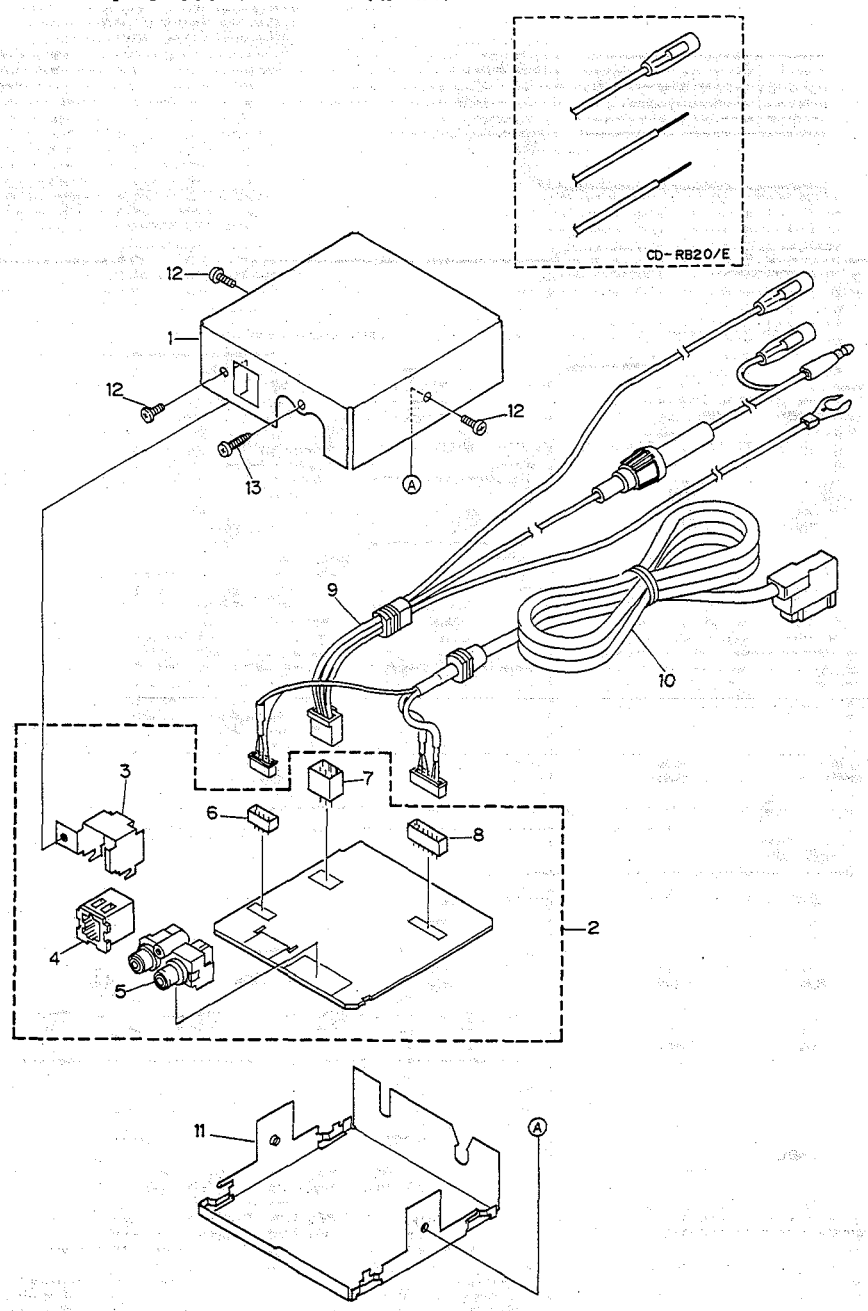
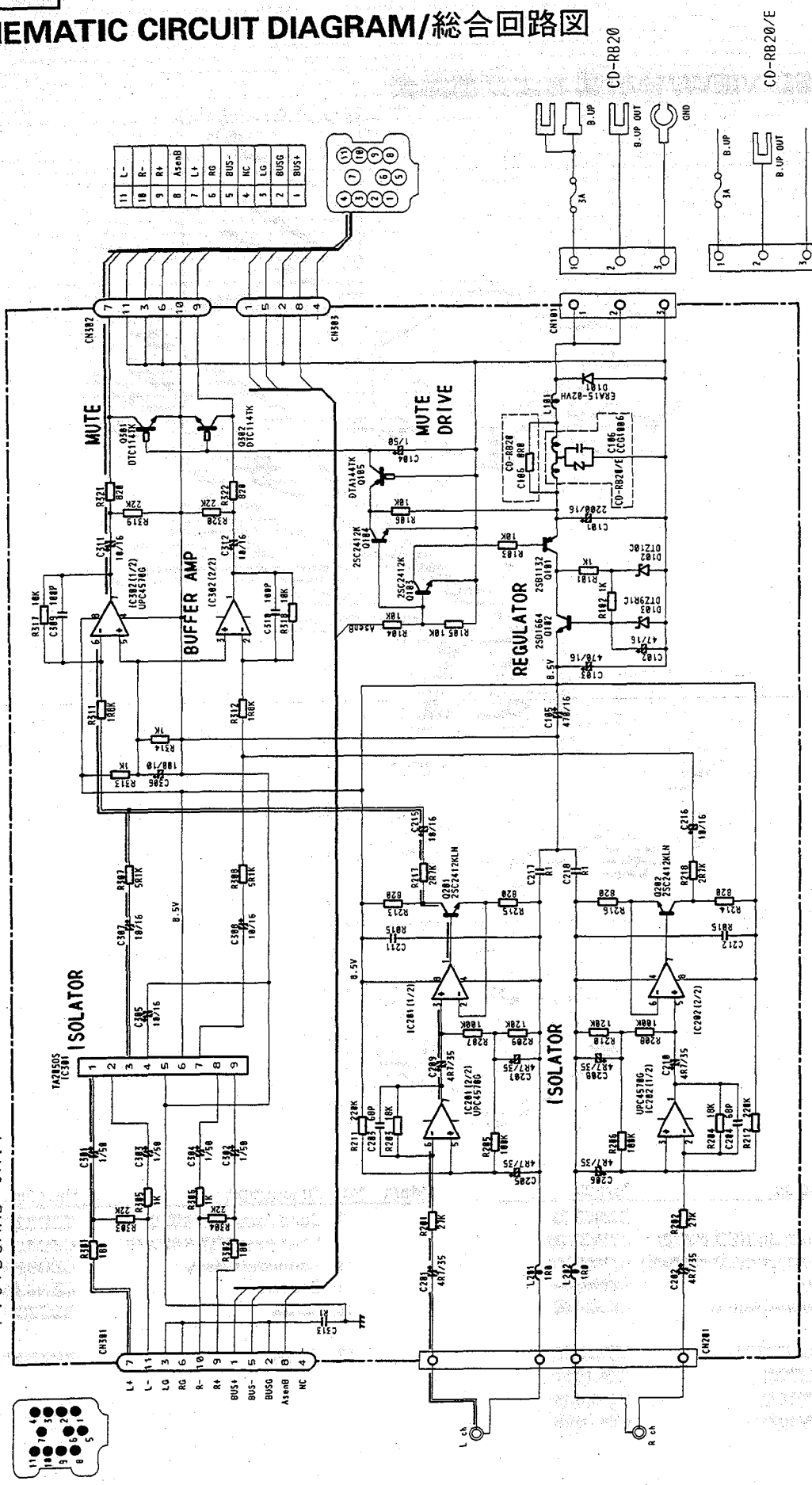



Fig.2

## ● Parts List

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 1 | Case | CZN6335 |
| | 2 | P.C.Board Unit(CD-RB20) | CZW3268 |
| | | P.C.Board Unit(CD-RB20/E) | CZW3272 |
| | 3 | Bracket | CZN6234 |
| | 4 | Connector(CN301) | CKS2486 |
| | 5 | Pin Jack(CN201) | CZK2058 |
| | 6 | Plug(CN303) | CZK2057 |
| | 7 | Plug(CN101) | CZK2035 |
| | 8 | Plug(CN302) | CZK2056 |
| | 9 | Cord Assy(CD-RB20) | CZD3253 |
| | | Cord Assy(CD-RB20/E) | CZD3256 |
| | 10 | Connector Assy | CZD3254 |
| | 11 | Chassis | CZN6334 |
| | 12 | Screw | BSZ30P050FMC |
| | 13 | Screw | BPZ30P080FMC |

# 3. SCHEMATIC CIRCUIT DIAGRAM/総合回路図




NOTE
□ は抵抗器を表現します。
チップ抵抗と普通の抵抗との区別はありません。
⊣⊢ はコンデンサを表現します。
チップコンデンサと普通のコンデンサとの区別はありません。

抵抗器とコンデンサの定数で
小数点のあるものを
次のように表現しています。
例) 2.2→2R2
0.022→R022

NOTE:
□ Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
⊣⊢ Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

Fig.3

# 4. CONNECTION DIAGRAM/総合パターン図

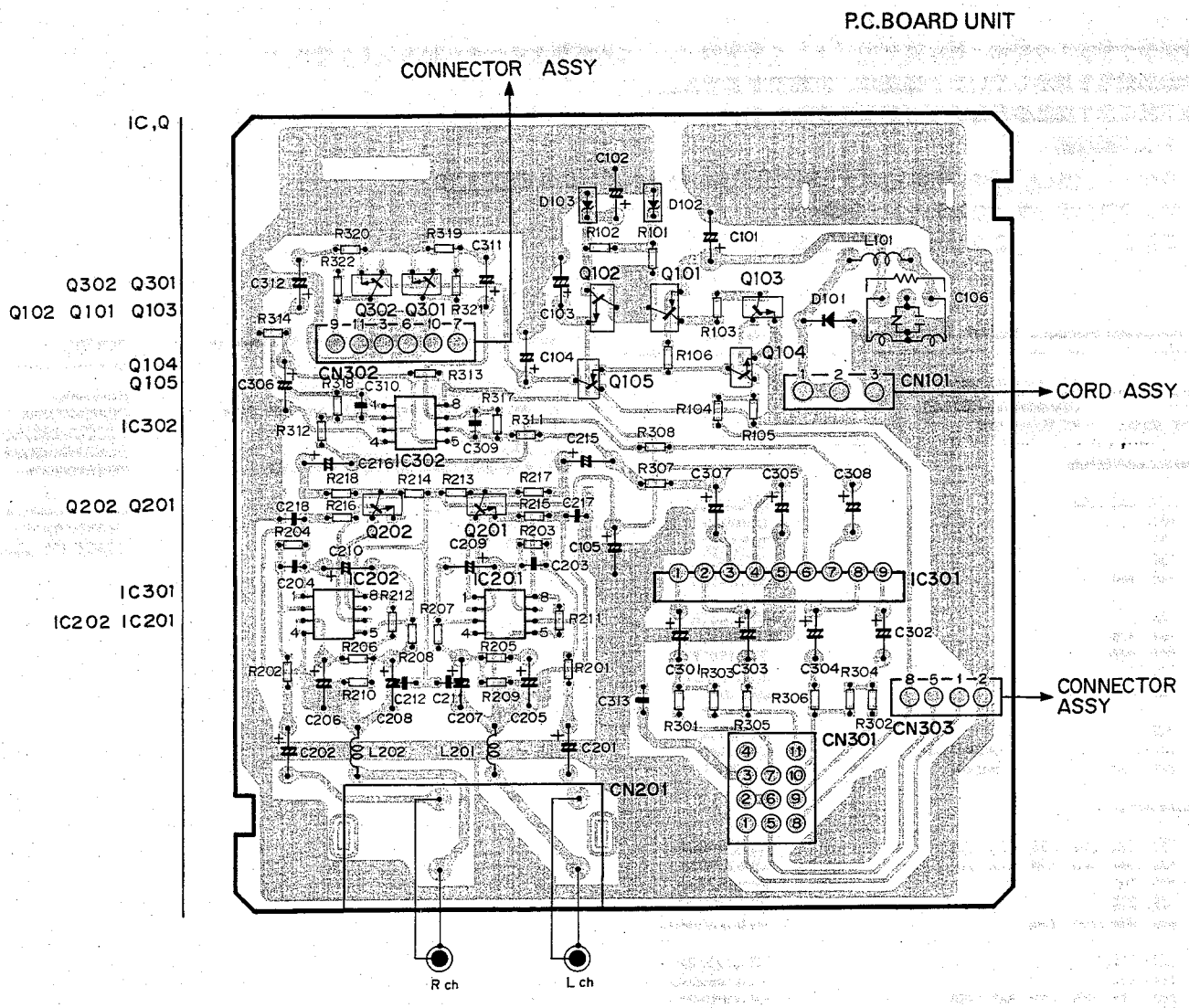



Fig.4

# 5. ELECTRICAL PARTS LIST/電気部品表

**NOTE:**

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

*Chip Resistor*

*RS1/○S○○○J,RS1/○○S○○○J*

*Chip Capacitor (except for CQS.....)*

*CKS....., CCS....., CSZS.....*

●部品を発注する際は、特に数字の“１”と英字の“ｌ”との区別をはっきり記入してください。
●部品番号を表示していない部品は、供給できません。
●下記に示す部品番号はチップ部品を表します。
チップ抵抗器
ＲＳ１／□Ｓ□□□Ｊ、ＲＳ１／□□Ｓ□□□Ｊ、ＲＮ１／１０ＳＥ□□□Ｄ
チップコンデンサ（ＣＱＳ・・・・・・を除く）
ＣＫＳ・・・・・・、ＣＣＳ・・・・・・、ＣＳＺＳ・・・・・・

| =====Circuit Symbol & No. Part Name===== | Part No. |
|---|---|
| Unit Number : CZW3268(CD-RB20) CZW3272(CD-RB20/E) | |
| Unit Name : P.C.Board Unit | |
| MISCELLANEOUS | |
| IC 201 202 302 | UPC4570G |
| IC 301 | TA2050S |
| Q 101 | 2SB1132 |
| Q 102 | 2SD1664 |
| Q 103 104 | 2SC2412K |
| Q 105 | DTA144TK |
| Q 201 202 | 2SC2412KLN |
| Q 301 302 | DTC114TK |
| D 101 | ERA15-02VH |
| D 102 | DTZ10C |
| D 103 | DTZ9R1C |
| L 101 Choke Coil | CTH1122 |
| L 201 202 Inductor | CZT2017 |
| RESISTORS | |
| R 101 102 305 306 313 314 | RS1/10S102J |
| R 103 104 105 106 317 318 | RS1/10S103J |
| R 201 202 | RS1/10S273J |
| R 203 204 | RS1/10S183J |
| R 205 206 207 208 | RS1/10S104J |
| R 209 210 | RS1/10S124J |
| R 211 212 | RS1/10S224J |
| R 213 214 215 216 321 322 | RS1/10S821J |
| R 217 218 | RS1/10S272J |
| R 301 302 | RS1/10S181J |
| R 303 304 319 320 | RS1/10S223J |
| R 307 308 | RS1/10S512J |
| R 311 312 | RS1/10S182J |
| CAPACITORS | |
| C 101 2200μF/16V | CCH1001 |
| C 102 | CEAS470M16 |
| C 103 105 | CEAS471M16 |
| C 104 301 302 303 304 | CEAS010M50 |
| C 106(CD-RB20) | RD1/4VS0R0JL |

| =====Circuit Symbol & No. Part Name===== | Part No. |
|---|---|
| C 106(CD-RB20/E) EMI Filter | CCG1006 |
| C 201 202 205 206 207 208 209 210 | CEAS4R7M35 |
| C 203 204 | CCSQCH680J50 |
| C 211 212 | CKSQYB153K50 |
| C 215 216 305 307 308 311 312 | CEAS100M16 |
| C 217 218 313 | CKSQYB104K25 |
| C 306 | CEAS101M10 |
| C 309 310 | CCSQCH101J50 |